

**REMARKS/ARGUMENTS**

Reconsideration and allowance of this application are respectfully requested.

Currently, claims 1-21 are pending in this application.

**Rejection Under 35 U.S.C. §102:**

Claims 22-26 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Ludwig. By this Amendment, claims 22-26 have been canceled. The above rejection is therefore deemed moot. None of still pending claims 1-21 have been rejected under 35 U.S.C. §102 (or §103).

**Objection to the Specification and Rejection Under 35 U.S.C. §112:**

The Amendment/Response filed January 6, 2005 was objected to under 35 U.S.C. §132 because it allegedly introduces new matter into the disclosure. Still pending claims 1-21 were rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. In rejecting claims 1-21 under 35 U.S.C. §112, first paragraph, page 4 of the Office Action held “The specification contains new matter thus either directly or indirectly introducing new matter into claims.”

The following sentence recited in page 3, lines 28-29 of the specification: “The signal mixing can take place either in the user’s terminal equipment, or in a centralised processing platform as is shown in Figure 2” has been deleted. This previously recited sentence presented an error in the specification. The removal of this sentence simply corrects this error. The removal of this sentence is clearly supported by the remainder of the specification. In particular, the portion of the sentence in which “The signal mixing” takes place in a centralized processing platform is clearly inconsistent with the remainder of the specification and thus its deletion from the specification is clearly in order. The

Office Action's rationale alleging that the deletion of this sentence presents new matter clearly ignores the remainder of the specification.

First, Applicant notes that the recitation of "**The** signal mixing can take place....(emphasis added)" on its face suggests that this sentence is an error since there is in fact no antecedent basis for "**The**" signal mixing in a centralized processing platform.

The background (see page 1, lines 7-14 of the original specification) describes prior art Figure 1 as follows:

"Conference bridges presently function by receiving audio from each of the participants, appropriately mixing the audio signals, and then distributing the mixed signal to each of the participants. All signal processing is concentrated in the bridge, and the result is monaural (that is, there is a single sound channel). This arrangement is shown in Figure 1, which will be described in detail later. The principal drawback with such systems is that the audio quality is monophonic, generally poor, and it is very difficult to determine which participants are speaking at any one time, especially when the number of participants is large (emphasis added)."

In contrast to the conference bridges described in prior art Fig. 1 which involve "appropriately mixing the audio signals, and then distributing the mixed signal to each of the participants," the systems illustrated in Figures 2 to 8 describing the present application "replace the conventional conference bridge system of Figure 1 with a multicast system in which several channels can be transmitted to each participant, using a multi-channel link comprising an uplink 3, and also a downlink which comprises a control channel 4 and a digital audio downlink 5. The audio downlink comprises several channels 51, 52." (See page 3, lines 6-11 of the original specification). The multi-channelled audio downlink 5, which is output from N:M Concentrator 230 (see Fig. 2 relating to the present invention) thus distinguishes over the conference bridge which

serves to mix audio signals as described in prior art Fig. 1. Accordingly, any signal “mixing” described in the centralised processing platform (exchange equipment) is clearly inconsistent with the goals of the present invention which relate to providing a multi-channel connection.

Indeed, the now removed sentence from the original specification is clearly erroneous in stating that the centralized platform may perform a mixing operation since it is inconsistent with everything else that is said about the invention in general. In addition to the discussion distinguishing Figs. 2-8 over prior art Fig. 1, page 4, line 13 *et seq.* of the original specification states that the N:M Concentrator 230 in the central processing platform delivers a number of channels to the customer equipment, where they are provided to a spatialiser 15 for controlling the mixing of the channels. Clearly, channel mixing takes place in the customer equipment, not the centralised platform. Throughout the description of Fig. 2, a plural number of channels are transmitted to the customer equipment from the central platform. The channels are not mixed into a single channel in the central platform.

Moreover, page 4, lines 26-27 of the original specification describes that the user may exclude the channel representing his own input. This would simply not be possible if his own input were mixed into a channel also carrying others, unless the others were also to be lost. Even further, the last paragraph of page 5 of the original specification refers to a de-multiplexer 140 in the terminal equipment (not the central platform). Again, if the incoming signal received by the terminal equipment were mixed, there would be nothing to de-multiplex.

Also, block diagram 230 of exchange equipment 100 illustrated in Fig. 2 is clearly labeled “N:M Concentrator.” Block diagram 230 is not labeled “Mixer.” The textual description of the originally-filed specification explicitly describes the N:M Concentrator 230 as selecting from input channels 11, 21, 31 those channels carrying useful information and passing only the selected channels over return link 5 as outputs of the N:M Concentrator 230. (See, e.g., page 4, lines 15 to 31 of the originally-filed specification.) In particular, page 4, lines 28-29 of the originally-filed specification states “Transmission efficiency is achieved because only the active subset N of the total number of channels M are transmitted at any one time.” This portion of the specification clearly provides support for N:M Concentrator 230 selecting certain input channels and passing only those selected channels over a return link 5, rather than mixing (adding two signals into a single stream).

Carrying the input channels over separate channels is indicated by reference on that link to “N-Channel Digital Audio Link” and again by the description of the N channels 51, 52 in the audio link. The N channels 51, 52 are clearly separate and distinguishable (see Figs. 3 and 4 as opposed to being mixed). Otherwise, it would not be possible to handle them separately in order to form a spatialized signal.

In Fig. 2, the only mixing that can possibly occur is performed in customer’s terminal equipment 10 where channels provided to spatialiser 15 are mixed to generate a spatialized signal in speaker equipment 12. (See Fig. 4 and page 4, lines 10-14 of the specification). Fig. 5 shows an alternative arrangement to that of Fig. 4 in which spatialization can be computed in the exchange equipment 100. (See page 7, lines 23-24).

**HUGHES**

**Application No. 09/623,977**

**September 19, 2005**

Accordingly, in the context of the entire originally-filed specification, it is clearly apparent to those skilled in the art that the phrase "signal mixing" at page 3, line 28 of the specification was an error. This error has now been corrected by deletion of the entire sentence containing this phrase. There is no disclosure whatsoever of any mixing in its common usage taking place in the central processing platform (exchange equipment 100). As described above, the processes performed by N:M Concentrator 230, namely selecting from input channels 11, 21, 31 and passing only the selected channels over return link 5, is clearly not mixing. Deletion of "signal mixing" at page 3, line 28 is therefore in order.

Accordingly, Applicant respectfully requests that the objection to the specification under 35 U.S.C. §132 and the rejection of still pending claims 1-21 under 35 U.S.C. §112, first paragraph, be withdrawn.

**Conclusion:**

Applicant believes that this entire application is in condition for allowance and respectfully requests a notice to this effect. If the Examiner has any questions or believes that an interview would further prosecution of this application, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

By: 

Raymond Y. Mah  
Reg. No. 41,426

RYM:sl  
901 North Glebe Road, 11th Floor  
Arlington, VA 22203-1808  
Telephone: (703) 816-4044  
Facsimile: (703) 816-4100